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| EXAMINER |
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DANG, KET D

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| ART UNIT | PAPER NUMBER |
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3742

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11/01/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NBN-IntelProp@bshg.com

Office Action Summary

Application No.

10/586,692

Applicant(s)

NEUMAYER ET AL.

Examiner

KET D. DANG

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 20-42 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 20-42 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 19 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This office action is responsive to the amendment/argument filed on August 31, 2011. As directed by the amendment: claims 20-21, 24, and 33 have been amended, claims 1-19 have been cancelled and new claims 39-42 have been added. Thus, claims 20-42 are presently pending in this application.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/EP0550118, filed on January 13, 2005.

Response to Amendment/Argument

3. Applicant's amendments/arguments filed August 31, 2011 have been fully considered but they are not persuasive.

Applicant's amendments have overcome the specification objections from previous Office Action.

Applicant argues on pages 11 and 13 of the Applicant's Arguments/Remarks that Abbott et al. is not analogous art. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24

USPQ2d 1443 (Fed. Cir. 1992). In this case, Abbott et al. is about depositing resistive coating on a substrate. Abbott et al. teaches a good coefficient of thermal expansion match with the insulating component such as ceramic and many other materials that are listed in the paragraph 0044 of Abbott.

In response to applicant's argument on pages 12-13 of the Applicant's Arguments/Remarks that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument on page 12 of the Applicant's Arguments/Remarks that there is no reason to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, Chen et al. teaches a device in which food can be heated by means of inductive coupling, comprising: a winding body 29 (fig. 2, i.e.

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the base portion of the container (30)); at least one secondary winding 137 (fig. 2) formed from a current conductor to which at least one heating element (see figure 2) is connected (col. 5, lines 23-29); an insulated casting that mounts the secondary winding 137 (fig. 2) in the winding body (col. 2, lines 46-50; col.8, lines 22-29). Abbott et al., teaches a good coefficient of thermal expansion match with the insulating component (para. 0044). Therefore, the combination of references fully meets all of the claimed limitations.

Similarly with respect to claims 21 and 24, the combination of Cornec et al. in view of Abbott et al. fully meets all of the claimed limitations.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 20-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is noted that the use of phrases such as “substantially corresponding to” and “substantially corresponds to” in claims 20, 21, 22, 23, 24 renders the claim indefinite because the term "substantially" is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

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not be reasonably apprised of the scope of the invention. It is unclear how much would be considered substantially correspond(ing)s.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20, 22-23, 25-29, 33, 35, and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6281611 B1) in view Abbott et al. (US Pub. No. 20010003336 A1).

8. Regarding claims 20, 22-23, 27, and 37, Chen et al. discloses a device in which food can be heated by means of inductive coupling, comprising: a winding body 29 (fig. 2, i.e. the base portion of the container (30)); at least one secondary winding 137 (fig. 2) formed from a current conductor to which at least one heating element (see figure 2) is connected (col. 5, lines 23-29); an insulated casting that mounts the secondary winding 137 (fig. 2) in the winding body (col. 2, lines 46-50; col.8, lines 22-29).

With respect to claims 25 and 40, Chen et al. discloses wherein the winding body a winding body 29 (fig. 2, i.e. the base portion of the container (30)) consists of ferrite (col. 2, lines 16-17).

With respect to claim 26, Chen et al. discloses the winding body for a temperature range of 20 °C to 150 °C (col. 1, lines 32-33).

With respect to claim 28, Chen et al. discloses wherein the winding body is rotationally symmetrical (as seen in figure 2, i.e. the container (30) can be rotated symmetrical to align with the permanent magnet (42)).

With respect to claim 35, Chen et al. discloses thermal insulation col.8, lines 22-29) disposed between the secondary winding 137 (fig. 2) and the heating element (as seen in figure 2).

Chen et al. discloses all of the limitations of the claimed invention as set forth above, except for a coefficient of thermal expansion substantially corresponding to that of the winding body.

However, a coefficient of thermal expansion substantially corresponding to that of the winding body is known in the art. Abbott et al., for example, teaches a coefficient of thermal expansion that is match with the insulating component or layer (para. 0044, lines 6-8; para. 0045). Abbott et al also teaches small thickness insulating layer (para. 0051).

With respect to claim 29, Abbott et al. teaches wherein the protective layer has a high material hardness (para. 0010).

With respect to claims 33, 39, and 41, Abbott et al. teaches wherein the casting means comprises filler especially made of ceramic (para. 0044, 0046).

With respect to claim 38, Abbott et al. teaches wherein the protective layer consists of ceramic (para. 0051).

Abbott et al. further teaches such a configuration provides greater latitude in heater design and greater control over the amount of heat generated (para. 0012). It

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would have been obvious to one of ordinary skill in the art to modify Chen et al. with a coefficient of thermal expansion substantially corresponding to that of the winding body of Abbott et al. in order to provide greater latitude in heater design and greater control over the amount of heat generated.

9. Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornec et al. (US 5866884) in view of Abbott et al. (US Pub. No. 20010003336 A1).

Regarding claims 21 and 24, Cornec et al. discloses for heating food by induction (see figure 1) comprising: a primary winding 1 (fig. 1) formed from a current conductor and connectable to a voltage source; a winding body 4 (fig. 1, i.e. coil support); and an insulated casting 2/2a (fig. 1) or 6/7 (fig. 2) that mounts the primary winding in the winding body 4 (fig. 1, i.e. coil support; col. 3, lines 19-47; and a protective layer thickness, col. 4, lines 22-35).

Cornec et al. discloses all of the limitations of the claimed invention as set forth above, except for a voltage source; and a coefficient of thermal expansion substantially corresponding to that of the winding body.

However, a voltage source; and a coefficient of thermal expansion substantially corresponding to that of the winding body is known in the art. Abbott et al., for example, teaches a voltage source (para. 0006, 0008); and a coefficient of thermal expansion substantially corresponding to that of the winding body (para. 0044, lines 6-8; para. 0045). Abbott et al also teaches small thickness insulating layer (para. 0051). Abbott et

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al. further teaches such a configuration provides greater latitude in heater design and greater control over the amount of heat generated (para. 0012). It would have been obvious to one of ordinary skill in the art to modify Cornec et al. with a coefficient of thermal expansion substantially corresponding to that of the winding body of Abbott et al. in order to provide greater latitude in heater design and greater control over the amount of heat generated.

10. Claims 30-31 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6281611 B1) in view Abbott et al. (US Pub. No. 20010003336 A1) as applied to claims 20, 22-23, 25-29, 33, 35, and 37-41 above, and further in view of Wittdorf et al. (US 6478843 B1).

Chen et al. in view Abbott et al. discloses all of the limitations as set forth above, except for wherein the protective layer is an amorphous hydrocarbon layer and having a thickness of 500 micrometers.

However, wherein the protective layer is an amorphous hydrocarbon layer and having a thickness of 500 micrometers is known in the art. Wittdorf et al., for example, teaches wherein the protective layer is an amorphous hydrocarbon layer (col. 2, line 64) and having a thickness (col. 3, line 44). It is known in the art such a configuration provides a means to protect the surface. It would have been obvious to one of ordinary skill in the art to modify Chen et al. in view Abbott et al. with the features above of Wittdorf et al. in order to provide a means to protect the surface.

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11. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6281611 B1) in view Abbott et al. (US Pub. No. 20010003336 A1) as applied to claims 20, 22-23, 25-29, 33, 35, and 37-41 above, and further in view of Simeray et al. (US 6291805 B1).

Chen et al. in view Abbott et al. discloses all of the limitations as set forth above, except for wherein the casting comprises epoxy resin.

However, wherein the casting comprises epoxy resin is known in the art. Simeray et al., for example, teaches epoxy resin layer (col. 6, lines 43). Simeray et al. further teaches such a configuration provides a mobile heating device which allows, with simple means, to heat or to maintain at temperature a plate or a dish without risk of burns, without complicated manipulation, especially without having to undertake a connection, and without flame or electrical voltage which could be harmful (col. 2, lines 8-14). It would have been obvious to one of ordinary skill in the art to modify Chen et al. in view Abbott et al. with wherein the casting comprises epoxy resin of Simeray et al. in order to provide a mobile heating device which allows, with simple means, to heat or to maintain at temperature a plate or a dish without risk of burns, without complicated manipulation, especially without having to undertake a connection, and without flame or electrical voltage which could be harmful.

12. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6281611 B1) in view Abbott et al. (US Pub. No. 20010003336 A1) as applied to

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claims 20, 22-23, 25-29, 33, 35, and 37-41 above, and further in view of Gross et al. (US 5893996).

Chen et al. in view Abbott et al. discloses all of the limitations as set forth above, except for wherein the heating element comprises at least one heating conductor having a meander-shaped.

However, wherein the heating element comprises at least one heating conductor having a meander-shaped is known in the art. Gross et al., for example, teaches heating conductor having a meander-shaped (see figure 2, col. 4, lines 14-18). Gross et al. further teaches such a configuration provides uniform coverage of the heating area (col. 4, lines 10-11). It would have been obvious to one of ordinary skill in the art to modify Chen et al. in view Abbott et al. with wherein the heating element comprises at least one heating conductor having a meander-shaped of Gross et al. in order to provide uniform coverage of the heating area.

13. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6281611 B1) in view Abbott et al. (US Pub. No. 20010003336 A1) as applied to claims 20, 22-23, 25-29, 33, 35, and 37-41 above, and further in view of Kicherer et al. (US 5900175).

Chen et al. in view Abbott et al. discloses all of the limitations as set forth above, except for wherein the thermal insulation comprises vermiculite.

However, wherein the thermal insulation comprises vermiculite is known in the art. Kicherer et al., for example, teaches wherein the thermal insulation comprises

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vermiculite (col. 2, line 6; col. 6, line 55). Kicherer et al. further teaches such a configuration provides a good electrical insulator and temperature resistance properties (col. 6, lines 58-60). It would have been obvious to one of ordinary skill in the art to modify Chen et al. in view Abbott et al. with wherein the thermal insulation comprises vermiculite of Kicherer et al. in order to provide a good electrical insulator and temperature resistance properties.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KET D. DANG whose telephone number is (571)270-7827. The examiner can normally be reached on Monday - Friday, 7:30 - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Tu can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KET D. DANG/
Examiner, Art Unit 3742
October 25, 2011

/Henry Yuen/
Supervisory Patent Examiner, Art
Unit 3742